INDEX TO VOL. XV (A)

AUTHORS' INDEX

Advani, G. D. .. *See* Kotwani and others.

Bai, K. Sunanda .. The scattering of light in liquids, 338.
Interferometric studies of light scattering in the alcohols, 349.
Interferometric studies of light scattering in liquids : Polarisation data, 357.

Basu, D. .. *See* Bhabha and Basu.

Bhabha, H. J., and Basu, D. The theory of particles of spin half and the Compton effect, 105.
The theory of particles of spin half and the Compton effect : erratum, 461.

Bhabha, H. J., and Chakrabarty, S. K. Calculations on the cascade theory with collision loss, 464.

Bhaduri, Bhutnath .. *See* Singh and Bhaduri.

Chakrabarty, S. K. .. *See* Bhabha and Chakrabarty.

Chalam, E. V. .. Application of tensor analysis to molecular anisotropy, 190.

Desai, R. D., and Mavani, C. K. Heterocylic compounds, XV, XVI, 1, 11.

Desai, R. D., Hunter, R. F. and Sahariya, G. S. Studies in the cyclohexane series, VI, 168.

Ganapathi, K. .. *See* Rajagopalan and Ganapathi.

George, Alleyamma .. *See* Pillai and George.

Govindarajan, S. R. .. *See* Rao and Govindarajan.

Hunter, R. F. .. *See* Desai and others.

Ittyerah, P. I., and Pandya, K. C. The condensation of aldehydes with amides, IX, X, 6, 258.

Iyengar, K. S. K. .. Exact solution of the equations of the general cascade theory with collision loss, 195.

Khanna, K. L., and Sen, S. C. — Application of potassium ferricyanide method for the estimation of carbohydrate in cane leaves, 456.

Kotwani, N. G., Sethna, S. M., and Advani, G. D. — Pechmann condensation of phenols with ethyl butyroacetate, 441.

Krishnaswamy, B., and Seshadri, T. R. — Synthetic experiments in the benzopyrone series, V, 437.

Krishnaswamy, T. K. .. — Estimation of cystine by nitroprusside, 135.

Mandan, Sahib Ram .. — Umbilical projection, 16.

Mani, (Miss) Anna .. — Fluorescence, absorption and scattering of light in ruby, 52.

Mavani, C. K. .. — *See* Desai and Mavani.

Modak, K. V. .. — *See* Prasad and Modak.

Murthy, S. Srinivasa .. — *See* Subbaraya and others.

Murty, G. V. L. N., and Seshadri, T. R. — Raman effect and hydrogen bonds, II, III, IV, 154, 230, 238.

Nayar, P. G. N. .. — The lattice and electronic spectrum of diamond, 293.
The luminiscence, absorption and scattering of light in diamonds, Part IV, Raman effect, 310.

Nedungadi, T. M. K. .. — Analysis of the Raman spectrum of single crystals of naphthalene, 376.

Neelakantam, K., and Row, L. Ramachandra — Fluorescence reactions with boric acid and O-hydroxycarbonyl compounds and their application in analytical chemistry, 81.

Pandya, K. C. .. — *See* Ittyerah and Pandya.

Pandya, N. S. .. — *See* Venkateswaran and Pandya.

Pillai, S. S. .. — On numbers of the form $2^a . 3^b$ (I), 128.
On algebraic irrationals, 173.
On a problem of diophantine approximation, 177.

Pillai, S. S., and George, Alleyamma — On numbers of the form $2^a . 3^b$ (II), 133.

Prasad, Mata, and Modak, K. V. — Viscosity measurements during the coagulation and gelation of concentrated sols of zirconium and stannic hydroxides, 445.

Rajagopalan, S., and Ganapathi, K. — Chemotherapy of bacterial infections, Part VI, 432.

Raman, C. V. .. — New concepts of the solid state, 65.

Rangaswami, S., and Seshadri, T. R. — Chemistry of pongamol, Part I, 417.

Rao, B. S. Madhava .. Commutation rules for matrices related to particles of higher spins, 139.

Rao, C. J. Dasa, and Seshadri, T. R. Fatty acids of neem oil, 161.

Rao, D. Venkateswara .. Scattering of light in binary liquid mixtures, 24.

Rao, N. A. Narayana .. *See* Subbaraya and others.

Rao, P. Suryaprakasa .. Occurrence of luteolin in the flowers of *Chrysanthemum indicum*, 123.

Rao, P. Suryaprakasa, and Seshadri, T. R. Isolation of hibiscitrin from the flowers of *Hibiscus sabdariffa* : constitution of hibiscetin, 148.

Rao, S. Ramachandra, and Govindarajan, S. R. The diamagnetism of the halogens, 35.

Rao, V. Subba, and Seshadri, T. R. Chemical investigation of Indian lichens, IV, V, 18, 429.

Row, L. Ramachandra .. *See* Neelakantam and Row.

Row, L. Ramachandra, and Seshadri, T. R. Flavylium salts containing pyrone rings, 118.

Sahariya, G. S. .. *See* Desai and others.

Sarabhai, Vikram .. The time distribution of cosmic rays, 89.

Satyanarayana, B. S. .. The fluorescence of the uranyl compounds and the Raman spectrum of the uranyl ion, 414.

Sen, S. C. .. *See* Khanna and Sen.

Seshadri, K. .. *See* Subbaraya and others.

Seshadri, T. R. .. *See* Rao and Seshadri.

See Murty and Seshadri.

See Rangaswami and Seshadri.

See Krishnaswamy and Seshadri.

Seshadri, T. R., and Venkateswarlu, V. The reactivity of the double bond in coumarins and related unsaturated carbonyl compounds, Part VIII, 424.

Sethna, S. M. .. *See* Kotwani and others.

Shintre, R. P. .. Studies in educational statistics, IV, 73.

Singh, Bawa Kartar, and Bhaduri, Bhutnath Studies on the dependence of optical rotatory power or chemical constitution, XIX, 281.

Singh, Chanan .. *See* Vaidhianathan and Singh.

Singh, Darbara .. The scattering of light in emulsions, 406.

Subbaraya, T. S., Seshadri, K., and Rao, N. A. Narayana — Interaction of atomic energy levels, VI, 250.

Subbaraya, T. S., Yusuff, Syed, and Murthy, S. Srinivasa — Interaction of atomic energy levels, V, 244.

Vaidhianathan, V. I., and Singh, Chanan — A new phenomenon in the movement of the free water-level in a soil and its bearing on the measurement of water-table, 264.

Venkateswaran, C. S. .. — Interferometric studies of light scattering in gases, 316.
Interferometric studies of light scattering in mobile liquids, 322.
Interferometric studies of light scattering in viscous liquids and glasses, 362.
Interferometric studies of light scattering : Hypersonic velocities in liquids, 371.

Venkateswaran, C. S., and Pandya, N. S. — The Raman spectra of organic compounds : Aniline, 390 ; Diethyl disulphide, 396 ; Binary liquid mixtures, 401.

Venkateswarlu, V. .. — *See* Seshadri and Venkateswarlu.

Yusuff, Syed .. — *See* Subbaraya and others.

TITLE INDEX

Aldehydes, condensation, with amides, IX, X (Ittyerah and Pandya), 6, 258.
Atomic energy levels, interaction, V, VI (Subbaraya and others), 244, 250.

Benzo-pyrone series, synthetic experiments, V (Krishnaswamy and Seshadri), 437.

Cascade theory, calculations, with collision loss (Bhabha and Chakrabarty), 464.
Cascade theory, general, exact solution of the equations, with collision loss (Iyengar), 195.
Chemotherapy of bacterial infections, VI (Rajagopalan and Ganapathi), 432.
Chrysanthemum indicum, flowers, occurrence of luteolin (Rao), 123.
Cosmic rays, the time distribution (Sarabhai), 89.
Coumarins and related unsaturated carbonyl compounds, the reactivity of the double bond, VIII (Seshadri and Venkateswarlu), 424.
Cyclohexane series, studies, VI (Desai and others), 168.
Cystine, estimation, by nitroprusside (Krishnaswamy), 135.

Diamagnetism of the halogens (Rao and Govindarajan), 35.
Diophantine approximation, a problem (Pillai), 177.

Flavylium salts containing pyrone rings (Row and Seshadri), 118.
Fluorescence, absorption and scattering of light in ruby (Anna Mani), 52.
Fluorescence of the uranyl compounds and the Raman spectrum of the urany ion (Satyanarayana), 414.
Fluorescence reactions with boric acid and O-hydroxy-carbonyl compounds, and their application in analytical chemistry (Neelakantam and Row), 81.

Heterocyclic compounds, XV, XVI (Desai and Mavani), 1, 11.
Hibiscus sabdariffa, flowers, isolation of hibiscitrin (Rao and Seshadri), 148.

Irrationals, algebraic (Pillai), 173.

Lichens, Indian, chemical investigation, IV, V (Rao and Seshadri), 18, 429.
Light, luminescence, absorption and scattering, in diamonds, IV (Nayar), 310.
Light, scattering, in binary liquid mixtures (Rao), 24.
Light, scattering, in emulsions (Singh), 406.
Light scattering in gases, interferometric studies (Venkateswaran), 316.
Light, scattering, in liquids (Sunanda Bai), 338.
Light scattering in liquids, interferometric studies (Sunanda Bai), 357.

Light scattering in mobile liquids, interferometric studies (Venkateswaran), 322.

Light, scattering, interferometric studies (Venkateswaran), 371.

Light scattering in the alcohols, interferometric studies (Sunanda Bai), 349.

Light scattering in viscous liquids and glasses, interferometric studies (Venkateswaran), 362.

Molecular anisotropy, application of tensor analysis (Chalam), 190.

Neem oil, fatty acids (Rao and Seshadri), 161.

Numbers of the form $2^a . 3^b$ (I) (Pillai), 128 ; (II) (Pillai and George), 133.

Optical rotatory power, dependence on chemical constitution, studies, XIX (Singh and Bhaduri), 281.

Particles of higher spins, matrices related to, commutation rules (Rao), 139.

Particles of spin half, the theory and the Compton effect (Bhabha and Basu), 105.

Particles of spin half, the theory and the Compton effect : erratum (Bhabha and Basu), 461.

Pechmann condensation of phenols with ethyl butyroacetate (Kotwani and others), 441.

Pongamol, chemistry, I (Rangaswami and Seshadri), 417.

Potassium ferricyanide method, application, for the estimation of carbohydrate in cane leaves (Khanna and Sen), 456.

Raman effect and hydrogen bonds, II, III, IV (Murty and Seshadri), 154, 230, 238.

Raman spectra of organic compounds (Venkateswaran and Pandya), 390, 396, 401.

Raman spectrum of single crystals of naphthalene, analysis (Nedungadi), 376.

Solid state, new concepts (Raman), 65.

Spectrum, lattice and electronic, of diamond (Nayar), 310.

Statistics, educational, studies, IV (Shintre), 73.

Umbilical projection (Mandan), 16.

Viscosity measurements during the coagulation and gelation of concentrated sols of zirconium and stannic hydroxides (Prasad and Modak), 445.

Water-level, free, in a soil, movement, a new phenomenon and its bearing on the measurement of water-table (Vaidhianathan and Singh), 264.